LISTING OF THE CLAIMS

Claim 1 **(canceled)**

Claim 2 **(currently amended)** A method for the production of a single heavy chain antibody in a transgenic non-human mammal comprising expressing a heterologous VHH heavy chain locus in that mammal specifically in B cells in response to antigen challenge wherein the VHH heavy chain locus is integrated into the non-human mammal's genome and said VHH heavy chain locus comprises:

(a) at least one VHH exon, at least one D exon and at least one J exon, wherein the VHH exon, the D exon and the J exon are capable of recombining to form a VDJ coding sequence, and wherein the VHH exon comprises a naturally occurring VHH coding sequence, and

(b) a constant heavy chain region comprising at least one constant heavy chain gene, wherein each of said at least one constant heavy chain gene, when expressed, does not express a functional CH1 domain,

(c) a locus control region (LCR) providing for expression of the VHH heavy chain locus specifically in B cells

said method comprising:

1) immunizing said mammal with an antigen and

2) isolating single heavy chain antibody against said antigen.

Claims 3-6 **(canceled)**

Claim 7 **(currently amended)** The method of claim 2 or 41 wherein the VHH single heavy chain locus comprises a camelid VHH, at least one D exon of human origin, [[and]] at

least one J exon of human origin, and a constant region of human origin.

Claims 8 - 9 **(canceled)**

Claim 10 **(previously presented)** The method of claim 2 or 41 wherein the constant heavy chain region comprises at least one constant region heavy chain gene which is of non-camelid origin.

Claim 11 **(previously presented)** The method of claim 10 wherein at least one constant region heavy chain gene is of human origin.

Claims 12 – 32 **(canceled)**

Claim 33 **(previously presented)** The method of claim 2 or 41 wherein the entire VHH single heavy chain locus is of camelid origin

Claims 34-38 **(canceled)**

Claim 39 **(previously presented)** The method according to claim 2 or 41 wherein the non-human mammal is a rodent.

Claim 40 **(canceled)**

Claim 41 **(currently amended)** A method for the production of a single heavy chain antibody in a transgenic mouse comprising expressing a heterologous VHH heavy chain locus in the mouse specifically in B cells in response to antigen challenge wherein the VHH heavy chain locus in integrated into said mouse's genome and said VHH heavy chain locus comprises:

(a) at least one VHH exon, at least one[[-D]] D exon and at least one[[-J]] J exon, wherein the VHH exon, the D exon and the J exon are capable of recombining to form a VDJ coding sequence, and wherein the VHH exon comprises a naturally occurring VHH coding sequence,

and

(b) a constant heavy chain region comprising at least one constant heavy chain gene, wherein each of said at least one constant heavy chain gene, when expressed, does not express a functional CH1 domain,

(c) a regulatory sequence providing for expression of the VHH heavy chain locus specifically in B cells

said method comprising:

1) immunizing said mammal with an antigen and

2) isolating single heavy chain antibody against said antigen.

Claim 42 **(canceled)**

Claim 43 **(previously presented)** The method of claim 2 or 41 wherein said antibody is isolated using hybridoma technology.

Claim 44 **(previously presented)** The method of claim 2 or 41 wherein said antibody comprises a variable region fragment and said variable region fragment is isolated using phage display.